

DEFORMABLE INFANT HEAD SUPPORT

Background and Field of Invention

5 This invention relates to infant head and neck supports; and more particularly relates to a novel and improved self-supporting, flexible but firm, infant head and neck support.

10 Infant head supports are well known. All of the known devices are designed as a soft or passive support of an infant's head or neck. The infant head supports are designed to surround an infant's head with a cushion or head roll that is not permanently deformable. For instance U.S. Patent No. 5,383,711 issued to Houghteling, discloses a head support device that supports the lateral sides of the infant's head from sudden movement or impact.

15 Another example of infant head support is disclosed in U.S. Patent No. 5,586,351 to Ive. This type of device provides a soft, pliable pad surrounding an infant's head.

20 It is therefore desirable to provide a deformable head and neck support for an infant which

will not only protect the head and neck of an infant from sudden movement or impact but also retain a newborn's head and neck in a desired position and conform to all infant head sizes. Premature infants and newborns typically are placed in an infant carseat or stroller with an infant support pad inserted therein. Oftentimes, the infant will fall asleep and, since their neck muscles are not strong enough to hold up their head, the head will fall forward or to the side posing a risk of injury or suffocation to the infant.

There is therefore a need for an infant head and neck support that will retain a newborn's head and neck in a desired position while providing a flexible but firm, means of support that is conformable into different opening sizes according to the size of the infant's head.

Summary of the Invention

It is therefore an object of the present invention to provide for a novel and improved head and neck support for infants.

It is another object of the present invention to provide for a novel and improved head and neck

support for infants that is adjustable according to the size of the infant's head.

5 It is an object of the present invention to provide for a novel and improved head and neck support for premature infants that prevents lateral and forward movement of the head.

10 It is an object of the present invention to provide for a novel and improved head and neck support for infants that aids in retaining an infant in a reposed position.

 It is another object of the present invention to provide a novel and improved infant head and neck support which can be used in an infant carseat, stroller or on a flat surface.

15 It is a final object of the present invention to provide for a novel and improved head support for infants that may serve as the sole means of support for an infant's head and neck.

20 In accordance with the present invention, There is provided an infant support pad with a padded base layer adapted to extend along a substantial length of an infant's body and deformable support means including an outer padding surrounding an inner reinforcing member at one end

of the layer for shaping the layer to conform to an infant's head and neck. The support means is secured to the base layer and includes a bendable wire substantially centered within the padding. The padding and reinforcing member perform the dual functions of preventing lateral movement of an infant's head while providing a flexible but firm support.

The support member is adjustable and includes means for adjusting the support member, such as, a releasable fastener so that the sides and distal ends of the support member can be extended inwardly to form a protective shell around the head of an infant.

The above and other objects, advantages and features of the present invention will become more readily appreciated and understood from a consideration of the following detailed description of preferred and modified forms of the present invention when taken together with the accompanying drawings in which:

Brief Description of the Drawings

Figure 1 is a front view of an embodiment of the present invention illustrating an infant support pad;

5 Figure 2 is a fragmentary rear view of the embodiment of Figure 1 with a breakaway portion illustrating a head support member;

 Figure 3 is a front view with a portion of a padded support member broken away to illustrate the wire-reinforcement of the embodiment of Figure 1;
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 Figure 4 is a sectional view of the embodiment of Figure 1 taken about lines 4-4;

 Figure 5 is a perspective view of the embodiment of Figure 1; and
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 Figure 6 is a fragmentary front view of an alternate embodiment.

Detailed Description of Preferred Embodiment

 Referring in more detail to the drawings, as shown in Figures 1 through 6, the present invention is now described. In the particular embodiment shown in Figures 1-5, an infant head support is illustrated in which the infant support device 10 as shown in Figure 1 is intended for use in an infant carseat, stroller, baby carriage, crib,
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infant support seat, changing table or any other surface where it is desirable to support an infant's head and neck. As shown in Figure 4, the device 10 comprises a base layer 13 including a lower layer 15 and an upper layer 17 with padding 14 encased between the lower layer 15 and the upper layer 17. The lower layer 15 and the upper layer 17 are preferably made up of a cotton fabric that is washable but may also be composed of a waterproof material for easy clean-up.

The base layer 13 may be of uniform thickness terminating in a thinned, reinforced edge, or seam 21 that is uniform and extends along the entire exterior of the base layer 13 as shown in Figure 1. The base layer 13 extends along a substantial length of an infant's body, a lower portion of the base layer 13 forming leg portions 23 and 25 which are well known in the prior art. The base layer 13 also includes two upper side notches 27 and 29 as shown in Figures 2 and 3 which are designed to be used in conjunction with a seatbelt harness or other safety straps in order to restrain the infant.

An upper portion of the base layer 13 includes a deformable support member 31 of inverted generally U-shaped configuration. The support member 31 is attached by seaming as at 16' along the outer, upper edge 16 of the base layer 13 as shown in dotted form in Figures 1, 2, 3, 5 and 6. The deformable support member 31 is designed to form a protective, conformable shell around an infant's head and is broadly made up of an outer padding or roll 34 and a bendable wire 33 which is composed of a malleable plastic or metal capable of being manually bent or deformed, as shown in Figure 2. The bendable wire 33 is covered in a fabric or paper sleeve 36 and extends a substantial length through a central opening or bore 32 so as to be centered within the padding 34 which is generally circular in cross-section.

The padding 34 is surrounded by a covering layer 35 of the same type of material as described previously for the lower and upper layers, 15 and 17, respectively. This is shown in Figure 4. The padding 34 and covering layer 35 completely surround the bendable wire 33 to protect and support an infant's head. The padding 34 may be a foam or

cotton padding or other similar material that covers the bendable wire 33 while still providing sufficient cushioning for the infant's head; and the padding 34 may be formed with a rolled sheet of padding having ends joined together at seam 18 to form a circular wall with the bore 32. The bendable wire 13 serves to retain the padding 34 in a generally upright position on the base layer 13 as well as to enable bending of sides 12 including a pair of distal or terminal ends 41 into different configurations to closely conform to the size and shape of the infant's head and neck. As shown in Figure 1, the deformable support member 31 has a closed end 11 and the opposite sides 12 which are slightly curved with the aid of the bendable wire 13 to conform to the shape of an infant's head. Lower ends of the sides 12 are also slightly curved or arcuate and terminate in the terminal ends 41.

Snap connectors 37 and 39 are attached on the undersides near the distal ends 41 of the support member 31 in facing relation to complementary or potential mating connectors 43, 45, 47 and 49 which are attached to opposite sides of the base layer 13, as shown in Figures 1, 2 and 3.

The connectors 37 and 39 may be fastened to mating connectors 43 and 49, as shown in Figure 3, forming a broad U-shaped opening, typically for a larger infant's head. The distal ends 41 are directed downwardly in this configuration, forming a cushioned but firm head support for an infant. Alternatively, the connectors 37 and 39 may be fastened to the mating connectors 45 and 47 to cause the support member 31 to form a narrow U-shaped opening with the terminal ends 41 being directed downwardly and inwardly, as shown in Figures 1 and 2. The inner pair of connectors 45 and 47 is offset in a lengthwise or upward direction from the outer pair of connectors 43 and 49. When the snap connectors 37 and 39 are fastened to the inner mating connectors 45 and 47, the position of the connectors 45 and 47 forces the terminal ends 41 of the support member 31 to be directed downwardly and slightly inwardly. Typically, a premature or small infant requires additional head and neck support which is provided with the inwardly directed terminal ends 41 of Figure 1. The inwardly directed terminal ends 41 provide added support to the neck of a small infant thereby preventing lateral

movement of the head while also aiding in preventing the infant from slouching or sliding forward.

5 The connectors 37 and 39 may also remain in the unfastened position wherein the support member 31 serves as a sole means of support for the infant's head. This form of invention would typically be utilized with a larger infant that does not require neck support.

10 As shown in Figure 5, the support pad 10 may be placed in an infant carseat to provide a firm but flexible means of support around an infant's head and neck, thereby preventing lateral movement of the infant's head and preventing the infant's head from tipping forward while in a carseat, 15 stroller or the like. Once the support pad 10 is configured in a particular shape, it will remain in that configuration until reformed. Further, the support pad 10 may be placed on a flat surface with the deformable support member 31 providing a means 20 for stabilizing an infant on its back while changing or dressing an infant.

Another embodiment of the present invention is shown in Figure 6 wherein the mating connectors 51, 53, 55 and 57 are aligned along a

common plane transversely to the length of the pad 10 and are designed to be fastened to the connectors 37, 39 to once again provide a rigid form of support for an infant. This configuration results in the terminal ends 41 facing downwardly and slightly inwardly.

In use, an infant may be placed on the support pad 10, the head of the infant placed within the support member 31 with the support member being adjusted to snugly fit around an infant's head, and the closed ends 41 are fastened using connectors 37 and 39 and their mating connectors in the outer position 43 and 49 or the inner position 45 and 47, depending upon the size of the infant.

It is therefore to be understood that while preferred forms of invention are herein set forth and described, the above and other modifications may be made therein without departing from the spirit and scope of the invention as defined by the appended claims and reasonable equivalents thereof.